Pilot Study To Be Conducted On the Hatchco Property-OU1

Bountiful/Woods Cross 5th South PCE Plume Superfund Site
Operable Unit 1
Bountiful/Woods Cross, Utah

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Background

In August 2004, the U.S. Environmental Protection Agency (EPA) published a proposed plan to cleanup the contaminated groundwater plume that resulted from past operations at the W.S. Hatch Company (Hatchco property). The Hatchco property is located between I-15 and 800 West street and between 500 South and 700 South streets. This groundwater plume is also know as Operable Unit 1 (OU1) and extends approximately 2000 feet to the west-northwest. The proposed plan identified monitored natural attenuation and enhanced in-situ biological/chemical remediation as the preferred alternative. The plan also identified the potential need for a pilot study.

At OU1 groundwater contaminants are found primarily in the shallow aquifer with the highest concentrations below the Hatchco property; and, much lower concentrations in the deeper aquifer. The primary contaminant of concern is trichloroethylene (TCE), a colorless liquid used as a solvent for cleaning and degreasing metal parts.

What Is Happening?

After further discussions, EPA and the Utah Department of Environmental Quality (UDEQ) agreed to conduct a pilot study for the enhanced in-situ remediation portion of the preferred alternative. The primary objective of the pilot study is to determine the site-specific requirements for full-scale implementation of the preferred alternative. Three specific objectives contribute to the overall purpose for the pilot study:

- Determine substrate requirements
- Determine injection strategy
- Determine biodegradation capability of the indigenous microbial community.

Another objective of the work plan is to provide a preliminary full-scale design for implementation of the preferred alternative. The details of this design will be based on the actual results of the pilot study.

When Will The Study Begin?

The pilot study is scheduled to start in July 2005 and should be completed within 12 months from its initiation date. Water samples will be collected monthly after the study begins to assist in determining the effectiveness of the pilot study.

NEED INFORMATION?

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How Will This Be Done?

The in-situ biological remediation approach selected for pilot studying is enhanced anaerobic bioremediation (EAB). The pilot study allows the agencies to assess the degradation rates that can be achieved by stimulating the breakdown of TCE at the source.

Accelerating TCE breakdown rates will speed up the restoration time frame and reduce the expansion of the groundwater plume. To facilitate the process, a fermentable carbon source will be added to assist the bacteria which will "eat" and degrade the TCE. Three different carbon sources will be compared during this study.

Also, the pilot study will be used to determine whether native bacteria at the site are capable to complete the degradation TCE, or whether it is necessary to add a microbial culture that has this capability.

What Will EPA Do Next?

Based on the performance of the pilot study, EPA and UDEQ will select a final remedy which will be presented in a Record of Decision (ROD)

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